Original Research Paper

Volume - 11 | Issue - 02 | February - 2021 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Occupational Therapy

# ASSESSMENT OF WORKPLACE STRESS AMONGST OCCUPATIONAL THERAPY PROFESSIONALS WORKING IN INSTITUTIONS: AN OBSERVATIONAL CROSS SECTIONAL STUDY

| | |
|---|---|
| **Dr. Shilpshree P. Palsule*** | Bsc, Msc, Assistant Professor,Occupational Therapy in orthopaedic condition. Seth G. S. Medical College & KEM Hospital. *Corresponding Author |
| **Dejul R. Dedhiya** | BOTh, intern at Seth GSMC, Seth G. S. Medical College & KEM Hospital. |
| **Sanjeevanee V.Charde** | BOTh,intern at Seth GSMC, Seth G. S. Medical College & KEM Hospital. |
| **Forum B. Dharia** | BOTh,intern at Seth GSMC, Seth G. S. Medical College & KEM Hospital. |
| **Hasti A. Divecha** | BOTh,intern at Seth GSMC, Seth G. S. Medical College & KEM Hospital. |
| **Saloni Y. Doshi** | BOTh,intern at Seth GSMC, Seth G. S. Medical College & KEM Hospital. |

**ABSTRACT**

**Background:** Occupational therapists are working various healthcare setups such as government, private hospitals (institutions). And during working they are subjected to various factors leading to the workplace and an imbalance. Workplace stress can lead to decrease in productivity and health. According to a social model of workplace stress, workplace stress occurs when there is a difference between the demands on the employee and the amount of control an employee has over meeting these demands i.e. difference in the efforts put in and rewards received in return. Literature shows a number of reports and studies stating workplace stress within the healthcare industry, but hardly light is thrown on stress suffered by Occupational therapists. Hence the study was conducted to find the workplace stress in the form of effort reward imbalance among occupational therapists using Effort-Reward Imbalance scale

**Objectives:** To identify the individual perception of relation between efforts at the workplace in relation to rewards received and to identify factors causing this imbalance and thus leading to workplace stress.

**Design:** An observational, cross sectional study design was chosen for the research.

**Methods:** The Institutional Ethics Committee (IEC) approval was obtained and the questionnaire was circulated to 70 therapists using convenient sampling. 35 responses were received, out of which 33 fitted into the inclusion criteria. Effort-Reward Imbalance questionnaire, a self-reporting scale was administered to each therapist. The score was interpreted and calculated according to given formula i.e. E/R ratio. Ratio of more or less than 1 interprets imbalance in efforts and rewards.

**Results:** High level of E/R ratio imbalance was found among Occupational therapists working in a variety of institutional settings. The mean E/R ratio of our sample is 1.43 which shows that Occupational therapists perceive high efforts and low rewards at their workplace.

**Conclusion:** This study concluded that there is a presence of imbalance between efforts and rewards among Occupational therapists working in institutions, leading to workplace stress.

**KEYWORDS :** Effort-Reward Imbalance scale, Effort-Reward ratio, Occupational therapists, Workplace stress.

## INTRODUCTION:

Work related stress can be defined as the positive or negative resultant physical condition and emotions aroused by conflict in the interplay between an employee, the physical workplace and fellows employees and supervisors. [1] A number of factors such as extensive working hours, low doctor to patient ratio and expected moral responsibility may contribute towards a stressful work environment for occupational therapy professionals. 'Effort–reward imbalance' was proposed as a stress-theoretical model of a health-adverse psychosocial work environment that is based on the notion of justice of exchange according to Siegrist in 1996. Social reciprocity, a fundamental principle of transactions that are characterized by some form of utility, lies at the core of the work contract, which defines distinct obligations in exchange for rewards (money, appreciation, career opportunities (promotion, job security). The model asserts that failed reciprocity, in terms of high effort and low reward, generates strong negative emotions and associated stress reactions with adverse long-term health consequences. An imbalance in the form of high effort and low reward ultimately results in stress. [2] This study means to explore the prevalence of workplace effort-reward imbalance which may contribute to stress among occupational therapists working in various institutional settings of the healthcare system.

## METHODS:

An observational cross-sectional research was designed and conducted on Occupational therapies working in various institutional settings such as government, private, and semi-government. The research was approved by the Institutional Ethics Committee (IEC) of a tertiary care hospital. 70 Occupational therapists working in institutions were approached through emails and Whatsapp from December 2019 to March 2020 using convenient random sampling. The questionnaire was circulated and made available electronically through a link for a Google form. A brief description of the study objectives with consent document were attached and sent in the Google form. Although the survey was kept anonymous, personal demographics such as age, gender and type of institution in which they are working were asked. A Google form consisting of demographics details and a short version of the 2012 questionnaire was used which has 16 items: 10 measuring reward, six measuring effort and six measuring over-commitment. Data was collected from participants using four-point Likert scales. The short version also uses four-point Likert scales, with three items measuring effort, seven measuring reward and six measuring over-commitment. To identify ERI, the effort–reward ratio is calculated, as follows:

$$ER = k*E/R$$

where E and *R* are the effort and reward scores, respectively, and *k* is a correction factor ($k = 7/3$ for the short version). ERI is present when $ER \neq 1$, with $ER < 1$ indicating an imbalance in favour of rewards and $ER > 1$ indicating an imbalance in favour of effort. [3] Data was compiled and tabulated using MS Excel. Descriptive statistics such as mean and percentages were used to describe the data. Unpaired t test was used to find out the significance between the ER ratios between the groups.

## RESULTS:

70 therapists were approached, out of which, 35 therapists responded to the questionnaire, 2 were above the age group of 60, hence were excluded from review as per inclusion criteria. With 33 therapists responding, there was a response rate of 47.14%. Among these, 6 were males and 27 were females. The average age of respondents was 36 years. **Figure 1** shows the prevalence of effort reward imbalance among males and females. 83% males (n=5 out of 6) showed E/R ratio above 1. 63% (n=21 out of 27) females responded E/R ratio above 1.**Figure 2** shows prevalence of effort reward imbalance across various age groups.80% (n=12 out of 15) therapists in age group 22-33 years showed an E/R ratio above 1. 75% (n=9 out of 12) therapists in

the age group of 34-44 years showed an E/R ratio above 1. 100% therapists (n=6) in the age group of 45-60 years showed an E/R ratio above 1.

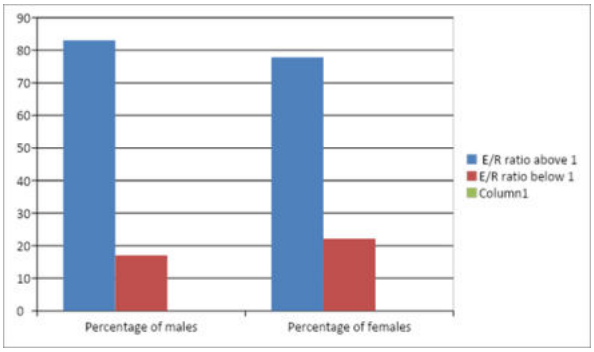


**Figure 1 shows the prevalence of effort reward imbalance among males and females.**

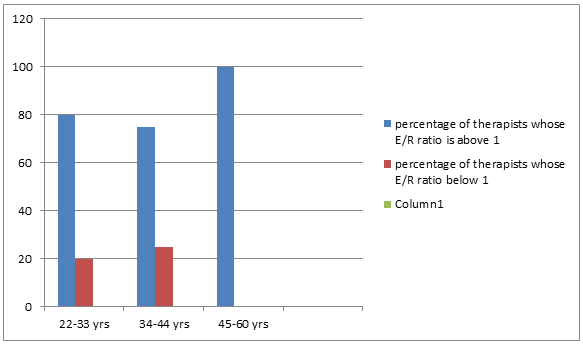


**Figure 2 shows prevalence of effort reward imbalance across various age groups.**

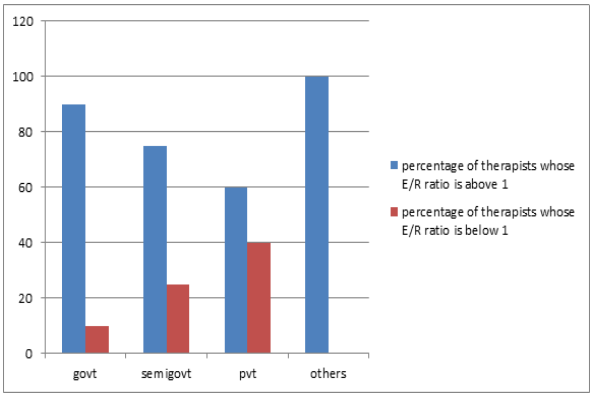


**Figure 3: shows the prevalence of therapists working in various institutions.**

**Figure 3:** shows the prevalence of therapists working in various institutions. 93.3% therapists (14 out of 15) working in government institutions showed an E/R ratio above 1. 66.7% therapists (6 out of 9) working in semi-government institutions showed an E/R ratio above 1.60% therapists (3 out of 5) working in private institutions showed an E/R ratio above 1.100% (4 out of 4) therapists working in other types of institutions( neither government/ semi government/ private institutions) showed an E/R ratio above 1.

The mean E/R ratio, the final formula to measure imbalance of the entire sample population, was found to be 1.43, which is above 1 depicting/correlating to imbalance between effort and reward resulting from workplace stress. The mean E/R ratio of therapists working in government institutions was found to be 1.74, of those working in semi-government institutions was found to be 1.07, of those working in private institutions was found to be 1.13, and of those working in other types of institutions was found to be 1.53. On applying the unpaired t test it was found that there is a significant difference between the E/R ratio of government and semi-government sectors as well as between government and private. Also there is a significant difference between the efforts section (Domain 1) of government and semi-government. (Table no 1)

**Table 1: It shows the percentage of responses recorded for each question on Effort-Reward Imbalance scale.**

| Questions/Responses | Strongly Disagree (%) | Disagree (%) | Agree (%) | Strongly Agree (%) |
|---|---|---|---|---|
| 1. I have constant time constant pressure due to a heavy work load. | 0 | 21.2 | 63.6 | 15 |
| 2. I have many interruptions and disturbances while performing my job. | 0 | 27.3 | 54.5 | 21.2 |
| 3. Over the past few years, my job has become more and more demanding. | 0 | 6 | 72.7 | 21.2 |
| 4. I receive the respect I deserve from my superior or a respective relevant person. | 9 | 33.3 | 48.5 | 9 |
| 5. My job promotion prospects are poor. | 3 | 15.1 | 30.3 | 51.5 |
| 6. I have experienced or I expect to experience an undesirable change in my work situation. | 3 | 36.3 | 51.5 | 9 |
| 7. My job security is poor. | 15.1 | 39.3 | 24.2 | 21.2 |
| 8. Considering all my efforts and the achievements, I receive the respect and prestige I deserve at work. | 18.2 | 42.4 | 33.3 | 6 |
| 9. Considering all my efforts and achievements, my job promotion prospects are adequate. | 24.2 | 48.5 | 21.2 | 6 |
| 10. Considering all my efforts and achievements, my salary/income is adequate. | 45.4 | 27.2 | 21.2 | 6 |
| 11. I get easily overwhelmed by time pressures at work. | 3 | 54.5 | 36.3 | 6 |
| 12. As soon as I get up in the morning I start thinking about work problem. | 21.2 | 45.4 | 30.3 | 3 |
| 13. When I get home, I can easily relax and "switch off" work. | 3 | 30.3 | 51.3 | 9 |
| 14. People close to me say I sacrifice too much for my job. | 6 | 21.2 | 54.5 | 18.2 |
| 15. Work rarely lets me go; it is still on my mind when I go to bed. | 15.1 | 54.5 | 27.2 | 3 |
| 16. If I postpone something that I was supposed to do today I'll have trouble sleeping at night. | 18.2 | 57.5 | 18.2 | 6 |

**Table 2: Dom 1 =questions related to efforts. Dom 2 =questions related to rewards. Dom 3 means questions related to over-commitment. G = government sector, S = semi government sector, P = private sector and O = sector including other varieties of institutions.**

| Sr No. | Characteristic | Group1 | Group1_mean | Group1_cnt | Group2 | Group2_mean | Group2_cnt | \|two_sided_critical_t_95\| | two_sided_significance_95 | t_statistic | two_sided_p_value |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Dom 1 | G | 9.53 | 15 | O | 9.25 | 4 | 3.18 | No | 0.2 | 0.85 |
| 1 | Dom 2 | G | 14.26 | 15 | O | 14 | 4 | 2.26 | No | 0.18 | 0.85 |
| 2 | Dom 3 | G | 14.26 | 15 | O | 14 | 4 | 2.57 | No | 0.13 | 0.89 |
| 3 | E/R Ratio | G | 1.65 | 15 | O | 1.53 | 4 | 2.57 | No | 0.40 | 0.70 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | Dom 1 | G | 9.53 | 15 | P | 8.6 | 5 | 2.3 | No | 1.54 | 0.16 |
| 5 | Dom 2 | G | 14.26 | 15 | P | 18.4 | 5 | 2.4 | No | -1.78 | 0.12 |
| 6 | Dom 3 | G | 14.26 | 15 | P | 14.6 | 5 | 2.2 | No | -0.24 | 0.80 |
| 7 | E/R Ratio | G | 1.654 | 15 | P | 1.136 | 5 | 2.17 | Yes | 2.57 | 0.02* |
| 8 | Dom 1 | G | 9.53 | 15 | S | 8 | 9 | 2.07 | Yes | 3.84 | 0.000** |
| 9 | Dom 2 | G | 14.26 | 15 | S | 16 | 9 | 2.07 | No | -1.2 | 0.21 |
| 10 | Dom 3 | G | 14.26 | 15 | S | 13.5 | 9 | 2.07 | No | 0.68 | 0.50 |
| 11 | E/R Ratio | G | 1.654 | 15 | S | 1.18 | 9 | 2.07 | Yes | 2.88 | 0.008** |
| 12 | Dom 1 | O | 9.25 | 4 | P | 8.6 | 5 | 2.77 | No | 0.44 | 0.68 |
| 13 | Dom 2 | O | 14 | 4 | P | 18.4 | 5 | 2.44 | No | -1.87 | 0.11 |
| 14 | Dom 3 | O | 14 | 4 | P | 14.6 | 5 | 2.57 | No | -0.30 | 0.77 |
| 15 | E/R Ratio | O | 1.53 | 4 | P | 1.136 | 5 | 2.57 | No | 1.37 | 0.22 |
| 16 | Dom 1 | O | 9.25 | 4 | S | 8 | 9 | 3.18 | No | 0.89 | 0.43 |
| 17 | Dom 2 | O | 14 | 4 | S | 16 | 9 | 2.36 | No | -1.41 | 0.19 |
| 18 | Dom 3 | O | 14 | 4 | S | 13.5 | 9 | 2.77 | No | 0.24 | 0.81 |
| 19 | E/R Ratio | O | 1.5375 | 4 | S | 1.18 | 9 | 2.77 | No | 1.32 | 0.25 |
| 20 | Dom 1 | P | 8.6 | 5 | S | 8 | 9 | 2.44 | No | 1.06 | 0.32 |
| 21 | Dom 2 | P | 18.4 | 5 | S | 16 | 9 | 2.44 | No | 1.05 | 0.33 |
| 22 | Dom 3 | P | 14.6 | 5 | S | 13.5 | 9 | 2.44 | No | 0.94 | 0.37 |
| 23 | E/R Ratio | P | 1.136 | 5 | S | 1.18 | 9 | 2.36 | No | -0.26 | 0.79 |

*** p value significant**
**** p value highly significant**

## DISCUSSION:

A number of scales and models are available to assess workplace stress among different professionals. But we used Effort Reward imbalance model in our study as it has a standardized scale which is self-explanatory, simple and self-assessed questions which evaluates workplace stress in the form of reciprocity in the efforts and rewards which states efforts means demands and obligations and rewards means salary, esteem, and job security. [2] Our study also showed that prevalence of effort reward imbalance was more in the government sector in comparison to other sectors. This is maybe due to some reasons such as lack of sufficient staff, maximum amount of workload, lack of job prospects causing job insecurity, lack of equipment, paperwork, long working hours and other personal health issues. It was more in males in comparison to females. A ratio above 1 was found among all the age groups of therapists. Our results showed high scores of effort reward ratio. 81.8% (n=27) participants scored ratio above 1 indicative of perceived effort reward imbalance which directs to workplace stress. On applying the unpaired t test it was found that there is a significant difference between the E/R ratio of government and semi-government sectors as well as between government and private. Also there is a significant difference between the efforts section (Domain 1) of government and semi-government. (Table no 2)

This finding could be attributed to the nature of the test, where significant differences in means of samples and not individual data points were considered. Also, the sample sizes of each of the groups were not equal... The adverse effects of stress experienced, leads to various cardiovascular and psychological disorders if stress persists or present for prolonged times. [2] Our results were consistent with the results and conclusion of other studies among other professionals. One of the studies done by Beschoner et al. showed more working hours per week and working days on weekends were associated with an increased effort/reward imbalance and higher burnout scores. [4] Another study conducted by Loerbroks et al. suggests that high work-related efforts and low rewards are associated with reports of poorer patient care among physicians, irrespectively of physicians' depressive symptoms. [5] The effort-reward imbalance model focuses on the reciprocity of exchange in occupational life where high-cost/low-gain conditions are considered particularly stressful. [2]Some studies already support that high-effort/low reward-conditions are predictive of cardiovascular diseases. [6] In an epidemiologic study conducted in European countries concluded that Internal consistency of the scales was satisfactory in all samples, and the factorial structure of the scales was consistently confirmed (all goodness of fit measures were >0.92). Moreover, in 12 of 14 analyses, significantly elevated odds ratios of poor health were observed in employees scoring high on the ERI scales. [7] Other studies concluded their findings and showed independent cumulative effects of both the Job Demand Control model (JD-C Model) and the Effort Reward Imbalance model (ERI Model) on employee well-being and are not significantly different in men and women as well as in young and old people. In particular, high (psychological and physical) efforts and low rewards adversely affected employee well-being.[8] As per the National Health Profile 2018 in India, the ratio of allopathic doctors to patient is approximately 1:11,082 and therapists are even less in numbers than allopathic doctors which deranges this ratio drastically from the ideal ratio of 1:1000 suggested by WHO. The workplace stress leads to burnout syndrome in professionals working in hospitals in India. They also face other adversities such as lack of appreciation, poor living conditions, unhealthy food habits, lack of insurance and protection, etc., which predisposes them to lifestyle disorders such as cardiovascular diseases, hypertension, hyperlipidemia, and lack of energy to spend time with family and friends along with workplace stress. Burnout syndrome itself has been linked to psychological disorders and somatic symptoms including insomnia, irritability, and even suicidal tendencies. [1] Although a sample size of 35 cannot be representative of the entire population of Occupational therapists working in various sectors of society and the healthcare system. , the study provided us with an insight into the grave issue of effort reward imbalance in the country. The high prevalence of dissatisfaction and effort reward imbalance leading to workplace stress is a cause for serious concern. Workplace stress has physical, emotional and psychological disturbances that not only harm the therapists but also reduces their ability to serve the patients.

## CONCLUSION:

The study concluded that there is a high level of ER imbalance among Occupational Therapists, both in the government, semi government and private sector. The statistical significance detected however, is no way a clear indicator for actual clinical significance at the current stage. But, the study paves the way for further analysis of these differences by multiple targeted studies to establish the relationship with actual clinical significance.

## LIMITATIONS:

Small sample size. Data collection was restricted to a specific geographical area-Mumbai. Specific population of therapists working in institutions was selected.

## Recommendations:

More extensive studies with larger population groups should be carried out to get accurate and generalizable results. The identification of symptoms and introduction of stress management techniques and coping strategies from the core should be advocated to achieve balance between work life and personal life. Even better facilities should be provided from the management of the institutions.

## REFERENCES:


1. Dhusia AH, Dhaimade PA, Jain AA, Shemna SS, Dubey PN. Prevalence of Occupational Burnout among Resident Doctors Working in Public Sector Hospitals in Mumbai. *Indian J Community Med.* 2019;44(4):352– 356. doi:10.4103/ ijcm.IJCM 78 19
2. Science direct.com [Internet] J. Siegrist, in International Encyclopedia of the Social & Behavioral Sciences, 2001. Available from:https://www.sciencedirect.com/ topics/ computer-science/stressful-experience
3. Jessica Stanhope, Effort–Reward Imbalance Questionnaire, *Occupational Medicine*, Volume 67, Issue 4, June 2017, Pages 314–315, https://doi.org/10.1093/occmed/kqx023
4. Beschoner P, von Wietersheim J, Jarczok MN, et al. Changes in Working Conditions and Mental Health Among Intensive Care Physicians Across a Decade. *Front Psychiatry*. 2020;11:145. Published 2020 Mar 31. doi:10.3389/fpsyt.2020.00145
5. Loerbroks A, Weigl M, Li J, Angerer P. Effort-reward imbalance and perceived quality of patient care: a cross-sectional study among physicians in Germany. *BMC Public Health*. 2016;16:342. Published 2016 Apr 18. doi:10.1186/s12889-016-3016-y
6. Niedhammer I, Siegrist J. Facteurs psychosociaux au travail et maladies cardio-

vasculaires: l'apport du modèle du Déséquilibre Efforts/Récompenses [Psychosocial factors at work and cardiovascular diseases: contribution of the Effort-Reward Imbalance model]. *Rev Epidemiol Sante Publique*. 1998;46(5):398─ 410.
7. Siegrist J, Starke D, Chandola T, et al. The measurement of effort-reward imbalance at work: European comparisons. Soc Sci Med. 2004;58(8):1483─ 1499. doi:10.1016/S0277-9536(03)00351-4
8. de Jonge J, Bosma H, Peter R, Siegrist J. Job strain, effort-reward imbalance and employee well-being: a large-scale cross-sectional study. *Soc Sci Med*. 2000;50 (9):1317─ 1327. doi:10.1016/s0277-9536(99)00388-3